

**SELF-CONFIGURING REPEATER SYSTEM AND METHOD**

**Abstract**

**[0044]** Provided is a system and method for a self-configuring repeater in a telecommunications network. The repeater receives data from a base transceiver station (BTS) via a downlink channel and sends data to the BTS via an uplink channel. The repeater compares the power level of a downlink signal (such as a pilot signal) to a reference power level. If the downlink signal's power level does not fall within a predetermined range relative to the reference power level, a comparator inside the repeater adjusts the received signal's power level by altering a gain of a downlink amplifier chain until the downlink signal's power level falls within the predetermined range. The comparator then applies the same gain to an uplink amplifier chain. In this way, the pilot signal's power level can be utilized to control the uplink noise level at the BTS.

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